Anti-Vesicular GABA Transporter (VGAT)  
Developed in Rabbit, Affinity Isolated Antibody

Product Number V5764

Product Description
Anti-Vesicular GABA transporter (VGAT) is developed in rabbit using a synthetic peptide corresponding to amino acids 1-20 located at the N-terminus of mouse VGAT conjugated to KLH as immunogen. This sequence is identical in rat VGAT and highly conserved (single amino acid substitution) in human VGAT. Anti-VGAT is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-VGAT specifically recognizes VGAT (may be observed as a doublet 52–57 kDa or a broad band at ~55 kDa). Applications include immunoblotting and immunofluorescence. Staining of the VGAT band in immunoblotting is specifically inhibited with the VGAT immunizing peptide (mouse, amino acids 1-20).

VGAT is a homolog of the C. elegans unc-47 protein involved in GABA transport. Unc-47 is expressed in GABA neurons, localizes to synaptic vesicles and confers vesicular GABA transport in transfected cells. Mutants of C. elegans in which the unc-47 gene encoding VGAT is non-functional or absent, exhibit a complete loss of GABAergic function and elevated levels of GABA in the cytoplasm.

VGAT is present in nerve endings of inhibitory neurons containing GABA, but also in glycinergic neurons in the brain and retina.1,4,5 At subcellular levels, VGAT specifically associates with synaptic vesicles.1,6 VGAT/VIAAT is also expressed in rat pancreatic islet cells.7

Reagent
The product is provided as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: 1.0-1.5 mg/ml

Precautions and Disclaimer
For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
For continuous use, store at 2–8 °C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile
A working concentration of 2-4 μg/ml is determined by immunoblotting, using mouse brain and rat brain extracts (S1 fraction).

Note: In order to obtain the best results in various techniques and preparations, it is recommended to determine the optimal working dilution by titration.
References